REMARKS

Careful consideration has been given to the Official Action of February 23, 2004 and reconsideration of the application as amended is respectfully requested.

With regard to the election requirement, the Examiner has acknowledged that amended claim 25 brings it into the category of the elected invention.

The Examiner has considered claims 3, 6-13, 16-24 and 28-40 to be withdrawn from further consideration as being drawn to a non-elected species. It is respectfully submitted that claims 3, 7, 9-12 and 20-23 are readable on the elected species and should be considered on their merits. This is consistent with the remarks in the amendment mailed November 17, 2003.

The Examiner has rejected claims 1, 2, 4, 5, 14, 15 and 25-27 as being unpatentable under 35 U.S.C. § 103 over Buscella in view of Aflenzer. The rejection is respectfully traversed. However, in order to clearly establish the patentable differences between the present invention and the cited art, independent claim 1 has been cancelled in favor of new claim 41 and independent claim 25 has been amended. The claims which are dependent from one or the other of these independent claims have been amended to be properly dependent and consistent therewith.

Regarding claims 1, 2, 4 and 5, the Examiner contends that the claimed method steps would have been "necessitated" by the product structure. This does not follow.

As for the product claims, the Examiner cites Buscella for disclosing an electrically conductive track unit 1 comprising at least one plastic embedded electrical component and conductive track foil 14 accommodated by plastic embedded stiffening element 12 and a housing 4.

In detail Buscella discloses a terminal board where electronic components are carried by a printed circuit type supporting base 12 (col. 2, lines 62-62); this PCB type supported base is inserted inside cavity 20 where it rests on supports 32 by its corners (col. 3, lines 28-39). Thereafter, the cavity 20 is filled with resin 40 below and above the PCB 12 which, thus, is embedded in the polymerized resin within the cavity (Fig. 2; and col. 3, last paragraph).

Accordingly, the conventional rigid printed circuit base 12 is accommodated within the housing 4, and is embedded in the resin 40, without any separate stiffening element. In fact, there is no mention of a stiffening element at all in Buscella. In particular, the reference numeral 14 designates conductive tracks on the PCB base 12 itself, and no flexible PCB foil having conductive tracks thereon is contemplated (as compared to the foil 4 with conductive tracks 10 of the present invention), but only a stiff PCB with tracks

14 thereon.

Accordingly, in Buscella, it would not be necessary, or useful, to use a separate stiffening element when embedding the PCB 12 within resin, and the statements of the Examiner at the bottom of page 2 and the top of page 3 are incorrect. Buscella does not suggest uniting a flexible conductive track foil with a separate stiffening element and embedding the unit formed thereby in the resin during an injection molding operation.

Buscella does not remotely consider the use of a separate flexible conductive track foil and does not face the problem of injection molding a plastic material therearound. Indeed, the separate use of a flexible conductive track foil (which is itself not adapted for being embedded in plastics material by injection molding), with a separate prefabricated stiffening element in which the foil is secured is not shown in Buscella. The thus supported foil is subjected to injection molding of the plastics material and the foil is secured by the separate stiffening element such that the foil is prevented from displacement and bending in the injection mold during the injection molding of the plastics material. The foil and stiffening element become embedded in the plastics materia.

It is clear therefore, that Buscella does not show starting with a flexible conductive track foil and does not face the problem of how to achieve injection molding of the foil without its bending and distortion. Hence, Buscella neither

faces the problem nor provides the solution according to the present invention. In fact, Buscella does not even show injection molding of the PCB board.

Even if combined with the injection molding technique disclosed by Aflenzer, et al., one would not arrive at the present invention. With the present invention, a solution is provided to overcome the problem of embedding a flexible foil (PCB) having conductive tracks in plastics material by injection molding (instead of using a pouring process) without deforming the foil in the injection mold during the injection molding process (see the specification, pages 2-3). To this end, the separate stiffening element is provided which carries, or accommodates, the foil so that a stiff unit is obtained which can be used in the injection molding process where the plastics material is injected and molded around the unit.

In a preferred embodiment, as shown, for example, in Figs. 1 and 2, the stiffening element comprises a casing (see claim 20), which is a principal difference between the present technique, and the prior art. All of the claims drawn to the casing of the stiffening element find no response in the cited art. The mold of Buscella is not comparable to the casing as it is not embedded in the plastics material with the foil.

It is to be added that Aflenzer, et al. also fail to teach a technique of how to embed a foil in a plastics material by injection molding. Namely, Aflenzer, et

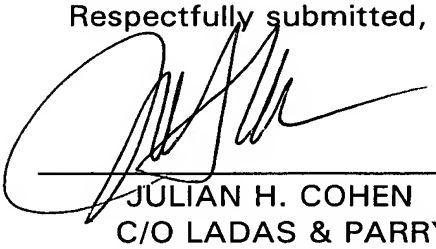
al. also disclose a stiff plate 4 carrying the respective electronic components 6, 10 and contacts 13, 14 adhered thereto. Accordingly, the plate (holding means) 4 is itself a stiff printed circuit board-type base which does not have, and does not need, any separate stiffening element. In accordance therewith, in fact no stiffening element is mentioned in Aflenzer, et al.

There is a fundamental difference between the prior art technique of placing a rigid PCB board in a mold for embedding the board in resin as compared to placing a separate PCB foil and a separate stiffening support for the foil in an injection mold to enable the foil to be embedded in the resin along with the stiffening support. Buscella and Aflenzer et al. provide no suggestion whatever as regards embedding a flexible PCB foil in an injection molded resin. The resulting product is also distinctive in that Buscella and Aflenzer et al. discloses a rigid PCB board embedded in resin whereas the invention provides a flexible PCB foil embedded in resin (along with its separate stiffening support).

In view of the above, the claims are considered as being novel, and non-obvious since both prior art references only disclose embedding of stiff PCB type bases in a plastics material, by pouring (Buscella) or by injection molding (Aflenzer, et al.), without the use of a separate stiffening element, whereas, in the present invention the PCB type base is a flexible foil.

By reason of the above action and comments, early and favourable reconsideration of the application and allowance of the claims is earnestly solicited.

Respectfully submitted,



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